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09/593,176	06/13/2000	Cary Lee Bates	ROC920000013	5450

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EXAMINER
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HUYNH, CONG LAC T

ART UNIT	PAPER NUMBER
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2178

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No. 09/593,176		Applicant(s) BATES ET AL.	
Examiner Cong-Lac Huynh		Art Unit 2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

1. This action is responsive to communications: the application filed on 6/13/00, and the IDS filed on 7/10/00.
2. Claims 1-24 are pending in the case. Claims 1, 9, and 17 are independent claims.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 9, 11, 17, 19 are rejected under 35 U.S.C. 102(a) as being anticipated by Ishikawa (US Pat No. 5,812,863, 9/22/98, filed 9/26/94).

Regarding independent claim 1, Ishikawa discloses:

- displaying a word list for user selection of a correctly spelled word (figure 6: the candidates is the word list for user to select a correctly spelled word)
- displaying assistance information associated with the correctly spelled word (figure 6 and col 9, line 63 to col 10, line 11: labels or usage information next to the words (e.g. standard, written..) is the *assistance information* associated with

the correctly spelled word; figure 11, S8, S10, S11: the information on usage is displayed with the candidate words, the list for users to select the correct spelled one)

Regarding claim 3, which is dependent on claim 1, Ishikawa discloses replacing the misspelled word with the correctly spelled word selected by the user (figure 6 and col 11, lines 16-37).

Claims 9, 11, and 17, 19 are for the signal bearing and the system of method claims 1 and 3, and are rejected under the same rationale.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 2, 10, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa as applied to claim 1 above, and further in view of Varma et al. (US Pat No. 6,507,831 B1, 1/14/03, filed 11/16/99).

Regarding claim 2, which is dependent on claim 1, Ishikawa does not disclose that the assistance information is selected from:

- one or more root words
- one or more related words
- one or more memorization clues

Varma discloses:

- providing the description in free-form text for repair record or adjustment for a product document involved with spelling errors (col 1, lines 10-25; col 2, lines 47-54)
- one or more root words (figure 2 and col 4, lines 36-45: stemming provides the radical of a word)
- one or more related words (figure 2 and col 4, lines 36-45: word variants provide the related word of a word)

Varma does not disclose that the assistance information is selected from one or more memorization clues. Instead, Varma discloses determining a plurality of repair records are diagnostically relevant or irrelevant (col 2, line 55 to col 3, line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Varma to include the clues as the assistance information since the clues help quickly determining whether a record is relevant or irrelevant.

Also, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Varma into Ishikawa since the assistance information text in Varma helps enhancing the correcting process of misspelled words in Ishikawa to be performed faster and more accurately.

Claims 10 and 18 are for the signal bearing and the system of method claim 2, and are rejected under the same rationale.

8. Claims 4-5, 12-13, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa as applied to claim 1 above, and further in view of Rogson (US Pat Application Publication No. US 2002/0010726 A1, 1/24/02, filed 3/28/00).

Regarding claim 4, which is dependent on claim 1, Ishikawa does not disclose:

- replacing the misspelled word with a user input word
- storing in memory an association of the user input word as the correctly spelled word for the misspelled word

Instead, Ishikawa discloses that correcting a misspelled word can be performed by a way other than selecting one from the candidate list (col 11, lines 38-63: accepting the misspelled word if it is correctly proper noun such as a person's name and the inputted word is entered into the user dictionary).

Rogson discloses:

- replacing the misspelled word with a user input word ([0009]: "if the misspelled word is not in the static update list and the *user corrects the misspelling...*")
- storing in memory an association of the user input word as the correctly spelled word for the misspelled word ([0009]: "if the misspelled word is not in the static update list and the user corrects the misspelling, *the misspelled word and the correction word are both captured a word pair in a dynamic update list*")

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Rogson into Ishikawa for the following reason. Rogson discloses replacing the misspelled word with a correct word inputted by a user providing the advantage of correcting a misspelled word by another way instead of selecting a correct one from the candidate list as in Ishikawa.

Regarding claim 5, which is dependent on claim 1, Ishikawa does not disclose:

- tracking a number of times the correctly spelled word has been misspelled
- when the number exceeds a threshold number, displaying a spelling exercise for user practice

Rogson discloses:

- tracking a number of times the correctly spelled word has been misspelled ([0026], [0049])
- when the number exceeds a threshold number, displaying a spelling exercise for user practice ([0028], [0032], [0033])

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Rogson to Ishikawa since Rogson has the capability of tracking the number of times the correctly spelled word has been misspelled and displaying the spelling exercise for user practice providing the advantage for improving the capability of correcting a misspelled word from the candidate list of Ishikawa by correcting the misspelled word via a spelling exercise.

Claims 12-13 and 20-21 are for the signal bearing and the system of method claims 4-5, and are rejected under the same rationale.

9. Claims 6-7, 14-15, 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa as applied to claim 1 above, and further in view of Walfish et al. (US Pat No. 6,047,300, 4/4/00, filed 5/15/97).

Regarding claim 6, which is dependent on claim 1, Ishikawa does not disclose:

- identifying a misspelling pattern associated with the misspelled word
- displaying an explanation for correcting the misspelling pattern

Walfish discloses:



- identifying a misspelling pattern associated with the misspelled word (col 3, lines 3-47: misspelling pattern can be typographical errors or cognitive spelling errors)
- displaying an explanation for correcting the misspelling pattern (col 3, lines 3-47 and col 4, lines 48-64: the fact that the set of rules or different criteria designed for detecting the spelling errors applied for identifying the misspelled patterns and for replacing a misspelled word suggests that these rules be displayed for helping user to make decision)

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Walfish into Ishikawa since Walfish discloses the misspelling pattern for a misspelled word and suggests displaying explanation for correcting the misspelled pattern providing the advantage of the misspelled correcting in Ishikawa since the misspelling patterns help users to easily recognize the error type as well as to quickly find a correct word to replace.

Regarding claim 7, which is dependent on claim 6, Ishikawa does not disclose the misspelling pattern comprises a typing error pattern.

Walfish discloses that the misspelling pattern comprises a typing error pattern (col 3, lines 3-33: "The different criteria are designed to detect common spelling errors. The *errors may be typographical errors* or cognitive spelling errors..." ).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Walfish into Ishikawa since Walfish discloses typing error pattern included in the misspelling pattern providing an easy way to recognize the

misspelled based on the error type and a fast way to replace the misspelled word by accurately finding the corresponding correct words.

Claims 14-15 and 22-23 are for the signal bearing and the system of method claims 6-7, and are rejected under the same rationale.

10. Claims 8, 16, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa (US Pat No. 5,812,863, 9/22/98, filed 9/26/94).

Regarding claim 8, which is dependent on claim 1, Ishikawa discloses:

- analyzing a plurality of words in a document (figures 7 and 14, S1-S7)

Ishikawa does not displaying analysis results.

Instead, Ishikawa further discloses *for each word* in the sentence of document:

- generating information on usage associated with the correct words in the candidate list (figure 11, S8-S11)
- replacing the misspelled word with the word selected from the candidate list or entering the correct word with the associated information to the user dictionary (col 11, lines 16-67)

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Ishikawa to include displaying analysis results since the fact that the generating step with the replacing step, and the generating step with the entering step are carried out for each of the words in the document suggests that these

steps are recorded by the system for avoiding a repetition process if the misspelling is happened to be on the same word occurred before. Since the data is recorded or stored by the system, it is suggested that such data can be displayed by the system as the text information being produced (col 10, lines 3-11).

Claims 16 and 24 are for the signal bearing and the system of method claim 8, and are rejected under the same rationale.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nielsen (US Pat No. 5,875,443, 2/23/99, filed 1/30/96).

Travis (US Pat No. 5,604,897, 2/18/97, filed 5/18/90).

Angiulo et al. (US Pat No. 6,044,387, 3/28/00, filed 9/10/97).

Domini et al. (US Pat No. 6,085,206, 7/4/00, filed 6/20/96).

Church (US Pat No. 5,572,423, 11/5/96, filed 1/23/95).

Schabes et al. (US Pat No. 6,424,983 B1, 7/23/02, filed 5/26/98).

Cherkassky et al., Conventional and associative memory-based spelling checkers, IEEE November 1990, pages 138-144.

Pollock et al., Automatic spelling correction in scientific and scholarly text, ACM 1984, pages 358-368.

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Turba et al., Checking for spelling and typographical errors in computer-based text,  
ACM 1981, pages 51-60.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cong-Lac Huynh whose telephone number is 703-305-0432. The examiner can normally be reached on Mon-Fri (8:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 703-308-5186. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9000.

clh  
11/28/03

  
STEPHEN S. HONG  
PRINCIPAL EXAMINER